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ABSTRACT

This paper outlines a presentation on the applications of microcomputers to day-to-day aspects of faculty responsibilities. A table displays a classification scheme that matches the faculty work categories of research, service, managing, advising, and instructing against available computer software packages for word processing, filing/retrieving, calculating, scheduling, graphics, and communication. Following a brief overview, the computer software family packages PFS and Micropro are described, including the PFS programs FILE, REPORT, GRAPH, and WRITE, and the Micropro programs for word processing (Wordstar, Spellstar, Mailmerge, Starindex), filing and retrieving (Infostar, Formgen, Datastar, Reportstar, Formsort, Supersort), calculating (Calcstar, Planstar), and integrating (Starburst). For each software family the description covers the costs, package strengths and limitations, learning time, and applications and examples. Using the edit and/or enter capability in Wordstar and the searching/updating capability of Infostar are specifically described. A summary outlines lessons learned in using software, and additional promising possibilities for the applications of microcomputers are noted. (LMM)

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**Faculty Uses for Microcomputers:
Managing Educational Activities with the Use of Microcomputers**

by

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**Presented at the
American Vocational Association Convention
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FACULTY USES FOR MICROCOMPUTERS

PART 1: OVERVIEW

1. Our approach for this session is intended to be PRACTICAL!
2. We will focus on the microcomputer's use to a professor in the day-to-day aspects of his/her job
3. Our objectives are simple:
 - Share our experience
 - Sensitize you to potential difficulties
 - Describe software capabilities
 - Interact -- Question & answer
4. Furthermore, we promise we will never talk programming today. In fact, Dr. Miller and I have made a pact to resist every pressure to learn how. We decided to be users -- not programmers, this maximizes the "return on our investment of TIME!"
5. While a quick scan through any computer magazine clearly shows a chaotic smorgasbord of hardware and software options and combinations available, we will not deluge you with them. In fact we couldn't.
6. Rather, we will deal only with a basic i.e. conventional technology, combination -- nothing esoteric!
7. Our comments are applicable to all hardware families. They are not specific to APPLES only.
8. How many of you have close convenient access (from your office) to a micro computer?
 - How many of you would like to?
 - Have one at home?
 - What brand? IBM....APPLE....RADIO SHACK....COMMODORE

9. To identify applications, and perhaps stimulate discussion later, we have classified the typical faculty member's workload, i.e. our day-to-day activities, into five groups as shown by the table's column headings.

- RESEARCH
- SERVICE
- MANAGING
- ADVISING
- INSTRUCTION

10. Conventional computer operations were categorized into six groups according to easily accessible software types:

- WORD PROCESSING
- FILING/RETRIEVING
- CALCULATING
- SCHEDULING
- GRAPHICS
- COMMUNICATION

11. We then developed a table, as in your handout, that matched the faculty work categories against the conveniently available software packages. This generated a grid which helped us identify typical applications that would be valuable to all faculty. The results are shown in the table.

12. Given this classification scheme and this session's time constraints, it became obvious that at best we could only deal with a small portion of what could appropriately be covered. Therefore we chose to deal only with two important software families that we felt had maximum value: PFS and Micropro.

13. Our presentation is divided into five parts as follows:

1. Overview
2. PFS Family
3. Micropro Family
4. Summary
5. Interaction: Q & A

To the extent that time, and your interest permit, we will then provide a demonstration of these programs.

VALUABLE MICROCOMPUTER CONTRIBUTIONS TO FACULTY PRODUCTIVITY

COMPUTER OPERATIONS	FACULTY WORK CATEGORIES				
	RESEARCH	SERVICE	MANAGING	ADVISING	INSTRUCTING
<u>Word Processing</u> • PFS: Write • MP: Wordstar Spellstar Mailmerge	Proposal boilerplate, Articles	Transcription of dictation & letters	Transcription of dictation & letters	Standard letters	Updating of handouts, schedules & syllabi
<u>Filing/Retrieving</u> • PFS: File/Report • MP: Infostar Datestar Reportstar	Bibliographic references	Committee rosters	Address file, Mailing lists	Student program records	Handouts, Test item banks
<u>Calculating</u> • Visi-Calc	Proposal budgeting, Analyzing data		Completing travel form calculations, Budgeting	Projecting GPA's	Grade calculations & recording
<u>Scheduling</u> • LISA: Project	Project planning		Project tracking & controlling	Charting degree program sequence	
<u>Graphics</u> • PFS: Graph	Displaying results		Analyzing & presenting information		
<u>Communication</u> • ASCII-II Express • Z-Pro	Entering data & control programs, Searching data bases	Electronic mail	Electronic mail		

Part 2: PFS FAMILY

I. DESCRIPTION OF PROGRAM PACKAGE

Four package system, under the tradename PFS, distributed by Software Publishing Corp., that can be used independently or collectively. The package (family) consists of the following programs: FILE, REPORT, GRAPH, WRITE.

II. FAMILY MEMBERS

- A. FILE -- works like a paper filing system, but without the paper. It lets you record, file, and retrieve information in ways not possible with paper and filing cabinets. You design forms to meet your needs and then fill in the specific information you have. You then can retrieve the specific information you want from the forms electronically in just a few seconds.
- B. REPORT -- complements PFS: FILE by producing reports in the form of tables from the information in PFS: FILE. REPORT can sort on any information category in your file forms. For example, an alphabetical list of names, sorted by zip code order, and/or compute basic calculations like averages, totals, subtotals, and percentages. Results are presentation quality with automatic centering and justification.
- C. GRAPH -- gives you presentation quality bar charts, line graphs, and pie charts -- in color or black & white. Very simple to develop graphs with additional data, such as labels are easily added and graph options quickly investigated. Automatic formatting, scaling, legend tabling, and pattern fill makes the development easy. GRAPH will also read data files from PFS: FILE or VISI-CALC without re-entry of data.
- D. WRITE -- word processing program with comprehensive editing functions. What you see on the screen is what you end up with on the paper. You can easily move and duplicate blocks of text, change margins, and number pages automatically, search for any word or phrase throughout a document, and insert other PFS: WRITE documents into the one you are preparing. As you edit, the text is automatically reformatted within the margins you have set. Enables you to print personalized form letters and envelopes using data created with PFS: FILE. You can also merge graphs created with PFS: GRAPH into the body of your document.

III COSTS

A. Hardware

• Apple II/II+/Ile (48K min)	(\$995)
• Monitor	(\$125)
• Two disk drives	(\$700)
• Printer & interface card	(\$450)
• Eighty column card (or mechanism)	(\$250)
	<u>\$2520</u>

B. Software

	APPLE	IBM
• PFS: FILE	\$125	\$140
• PFS: REPORT	\$125	\$140
• PFS: GRAPH	\$125	\$140
• PFS: WRITE	\$125	\$140

IV PACKAGE STRENGTHS AND LIMITATIONS

A. Strengths

1. Very easy to learn
2. Many common cursor commands across programs
3. Limited number of commands to remember
4. Inexpensive compared to most others
5. Allows data exchanges between programs
6. Documentation is easy to follow
7. One can change the design of a file or headings after data entry
8. Menu driven but only 3 - 6 options
9. Expanded print size for graphs

B. Limitations

1. Only one type of data file can be on any given disk
2. All data files must be on same disk
3. Graph can handle only a limited amount of data entry (36 data points, 4 graph lines, 45 charts, 8 pie)
4. Searching time is longer as you move into the body of the form

V LEARNING TIME

A. FILE	20 minutes
B. REPORT	20 minutes
C. GRAPH	20 minutes
D. WRITE	20 minutes

VI APPLICATIONS AND EXAMPLES

- A. File
- B. Report
- C. Graph
- D. Write

PART 3: MICROPRO FAMILY

I DESCRIPTION OF PROGRAM PACKAGE

Micropro's Star series consists of a wide variety of products aimed at the serious user. There is nothing frivolous about the family -- it is all business. Documentation is exhaustive and until recently not much fun. The package is expensive but it seems to be worth it. It is a defacto standard by virtue of its popularity

II FAMILY MEMBERS

A. Word processing: Here the family includes the following members:

1. Wordstar -- a word processing program that does almost everything
2. Spellstar -- a spell checking program with user-definable supplemental dictionaries
3. Mailmerge -- a program that lets you merge lists of addresses with letters, print multiple copies of a file, and to serially print a set of files
4. Starindex -- an automatic indexing and outline organizing program

B. Filing/Retrieving: Here the family includes the following members

1. Infostar -- a data base management system consisting of Datastar, Reportstar, Formgen, Report, Redit, and Formgen
2. Formgen -- creates a blank form (format) that will subsequently be used to guide data entry. This program can also specify the exact type of data that may be entered into each field
3. Datastar -- used to enter and search data
4. Reportstar-- used to specify how you want data fields printed out -- use for special formats different than the form originally created with Formgen
5. Formsort -- sorts data base per different alpha and/or numerical specifications
6. Supersort -- a sorting program for Star series files

C. Calculating: Here the family includes the following members:

1. Calcstar -- a calculating/spreadsheet program
2. Planstar -- a calculating/spreadsheet program with emphasis on financial uses

D. Integrating:

1. Starburst -- a routine-programming system that permits linking of Star series programs in an integrated fashion

III COSTS

A. Hardware

• Apple II/II+/Ile (48K min)	(\$995)
• Monitor	(\$125)
• CP/M card	(\$250)
• 16K RAM card minimum (II/II+ only)	(\$100)
• Two disk drives	(\$700)
• Printer & interface card	(\$450)
• Eighty column card (or mechanism)	(\$250)
	<u>\$2870</u>

B. Software

• Wordstar	\$325
• Spellstar	\$150
• Mailmerge	\$150
• Calcstar	\$195
• Planstar	\$295
• Starindex	\$150
• Infostar	\$495
• Starburst	\$150

IV PACKAGE STRENGTHS AND LIMITATIONS

A. Strengths

1. Very capable programs. They can do almost anything you might wish to do.
2. The package supports different levels of competence. One can produce useful work with a rudimentary, quickly gained knowledge. Later as the need arises one can choose to develop the increased levels of competence that lead to heightened productivity and capability.
3. The entire family is menu driven.
4. On-line help is usually available. This saves having to refer to the manual continuously.
5. Many uses exist. They can provide much useful assistance for a beginning user.
6. The family's components are integrated, hence one program's files can be used by another.
7. Because the family uses CP/M, its files are usable by other non-family programs.
8. The family members have a high degree of similarity of control functions (keys do the same thing).
9. The documentation is extensive/exhaustive (although much of it is dull and/or difficult). Recently however, new tutorials have been introduced that are very useful and effective.

10. Wordstar features:

- What you see is what you get
- Horizontal scrolling
- Block and column moves
- Search, find and replace
- Reformatting capabilities
- Insert/delete
- Variable letter (character width) and line spacing (height)
- Justification

11. Infostar features:

- 256 fields
- 64,000 records
- Data entry control and error checking
- Well error trapped
- Wild card searches
- Powerful report generator
- Extensive sorting capability
- Can store different data bases on same disk

B. Limitations

1. No direct Micropro support to customer
2. Relatively complex, many commands to learn
3. Detailed manuals, perhaps excessive information
4. Requires a lot of memory in computer
5. All Infostar records must be on same data disk
6. Requires CP/M (relatively expensive)

V LEARNING TIME

- | | |
|--------------|---|
| A. Wordstar | -- a curve, beginning with a day, but the learning keeps on coming. . . |
| B. Spelstar | -- two hours |
| C. Mailmerge | -- similar to Wordstar, initially two hours |
| D. Infostar | -- initially two days, but the learning curve is much flatter than Wordstar |

VI EXAMPLE APPLICATIONS

A. Wordstar Edit and/or Enter

1. Insert program and file disk
2. Boot program disk
3. Run Wordstar
4. Log onto Drive B
5. Open desired file
6. Edit/add/delete as desired
7. Save
8. Print -- answer menu questions

B. Searching/Updating Infostar

1. Boot Datastar program
2. Run Datastar and indicate database file
3. Search/update as desired
 - Search by key
 - Search by edit mask
 - Search by index order
 - add new records
 - update existing records

PART 4: SUMMARY

I. SUMMARY: LESSONS LEARNED ALONG THE WAY

1. Don't worry about the latest. . . you'll go gray quickly. Concern yourself with utility. Get the most out of what you have!
2. There is great value in area/departamental standardization of hardware and software families. More bang per \$!
3. Useful resources
 - cultivate dealer
 - friendly campus computer types
 - user groups eg. APPLE Clubs
 - another user
 - magazines
4. Software and hardware prices vary greatly. Bundling of software & hardware items = price savings. Prices are soft, so negotiate!
5. Dealer friendship is worth much. Cultivate it!
6. NEVER USE ORIGINALS of disks, always use backups!!!!!!!!!!!!

II. SUMMARY: CONTENT

1. Described two major families (PFS & MICROPRO) of software
 - components
 - costs
 - features
 - learning time
 - applications

III. CLOSING

1. Among the many untapped potentials of microcomputers in support of faculty work are the following promising possibilities that for reasons of both time and expertise were not yet pursued or discussed:
 - networking
 - communications
 - instruction
 - electronic mail
 - scheduling personal calendars
 - PERTing
 - filing advisee records
 - entering research data into mainframes
 - writing articles etc.

- tracking budgets
- organizing and indexing bibliographies
- assembling and accessing test item banks
- keeping address files
- generating form letters
- search data bases
- check spelling
- merge address and letter files
- transcribing and polishing dictated letters
- developing budgets for proposals
- recording and grading student course performance
- scheduling and tracking project performance
- maintaining syllabi and course handouts current
- dialing telephone numbers
- presenting video-slide show visuals
- linking to mainframe computers (printing out)
- scheduling appointments & maintaining calendars
- generating graphics
- graphing data

PART 5: INTERACTION: QUESTIONS & ANSWERS

I. DEMONSTRATION: PFS FAMILY

II. DEMONSTRATION: MICROPRO FAMILY